Docket No. 72-25

## ENVIRONMENTAL IMPACT STATEMENT SCOPING PROCESS

### **SCOPING SUMMARY REPORT**

# Proposed Idaho Spent Nuclear Fuel Facility Independent Storage Installation

### November 2002



U.S. Nuclear Regulatory Commission Rockville, Maryland

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ATTACHMENT A

#### **ABBREVIATIONS**

CNWRA Center for Nuclear Waste Regulatory Analyses

DOE U.S. Department of Energy

EIS Environmental Impact Statement

FWENC Foster Wheeler Environment Corporation

INEEL Idaho National Engineering and Environmental Laboratory

INTEC Idaho Nuclear Technology and Engineering Center

NEPA National Environmental Policy Act

NRC U.S. Nuclear Regulatory Commission

TRIGA Training, Research, and Isotope reactors built by General Atomics

#### 1. INTRODUCTION

On November 19, 2001, Foster Wheeler Environmental Corporation (FWENC) filed an application with the U.S. Nuclear Regulatory Commission (NRC) for a license to construct and operate an independent spent fuel storage installation (U.S. Nuclear Regulatory Commission, 2002a) at the Idaho National Engineering and Environmental Laboratory (INEEL) in Butte County, Idaho. If licensed, this new installation would be situated on an eight-acre (3.24 ha) site located adjacent to the Idaho Nuclear Technology and Engineering Center (INTEC), about three miles (4.8 km) north of the INEEL Central Facilities Area.

The proposed Idaho Spent Fuel Facility will be designed, constructed, and operated by FWENC under contract to the U.S. Department of Energy (DOE). The DOE has leased the site to FWENC for the operating life of the installation. The facility would store spent fuel and associated radioactive material from the Peach Bottom Unit 1 High-Temperature Gas-Cooled Reactor, the Shippingport Atomic Power Station, and various Training, Research, and Isotope reactors built by General Atomics (TRIGA reactors). This spent fuel is currently being stored within the INTEC. DOE plans to transfer it to the Idaho Spent Fuel Facility when that facility becomes operational. These transfers would occur completely within the boundaries of the INEEL site and will comply with INEEL procedures and the requirements of DOE. Upon arrival at the Idaho Spent Fuel Facility, the spent fuel would be (1) remotely removed from the containers in which it is currently stored, (2) visually inspected, (3) inventoried, (4) placed into new multipurpose canisters, and (5) placed into interim storage. When a geologic repository becomes available, the multipurpose canisters are intended to be removed from storage at the Idaho Spent Fuel Facility and transported to the repository.

The proposed Idaho Spent Fuel Facility would implement, in part, the portion of the DOE Spent Fuel Management and INEEL record of decision concerning construction of a dry spent fuel storage facility (U.S. Department of Energy, 1995a). It also would allow DOE to satisfy, in part, it's commitments in the October 16, 1995, Settlement Agreement among the DOE, the U.S. Department of the Navy, and the State of Idaho to construct dry storage facilities and employ multipurpose canisters to prepare spent fuel for disposal outside of Idaho. These objectives would be accomplished at the Idaho Spent Fuel Facility by:

- Receiving spent nuclear fuel generated at the Peach Bottom Unit 1 High-Temperature Gas-Cooled Reactor, the Shippingport Atomic Power Station, and various TRIGA research reactors;
- Transferring the spent nuclear fuel from the DOE storage containers in which it is currently stored into new multipurpose canisters certified by the NRC; and
- Placing the NRC-certified canisters into an NRC-licensed, interim spent fuel storage facility.

The license application will be considered under the provisions of NRC regulations at 10 CFR Part 72. If granted, the license will authorize the applicant to store spent nuclear fuel in a dry storage system at the applicant's Idaho Spent Fuel Facility site. Additionally, in accordance with NRC regulations at 10 CFR Part 51 and the National Environmental Policy Act

(NEPA), an environmental impact statement (EIS) is being prepared by the NRC to examine the potential environmental impacts of the proposed licensing action (i.e., to construct and operate an independent spent fuel storage installation). As part of the NEPA process, the NRC solicited scoping comments from the public. Scoping is an early and open process designed to determine the range of actions, alternatives, and potential impacts to be considered in the EIS, and to identify the significant issues related to the proposed action. Input from the public and other agencies is solicited so the analysis can be more clearly focused on issues of genuine concern. The NRC and its contractor, the Center for Nuclear Waste Regulatory Analyses (CNWRA), are reviewing relevant documents to ensure efficiency and to make decisions regarding their use (i.e., supplementing, tiering, or adoption) in preparing the Idaho Spent Fuel Facility EIS.

Under the present schedule, the EIS will be used to support a decision in 2004 by the NRC whether to authorize construction of the proposed Idaho Spent Fuel Facility. The schedule includes publishing the draft EIS for public comment in June 2003. The availability of the draft EIS, the dates of the public comment period, and scheduled public meetings will be announced in the Federal Register, on the NRC Idaho Spent Fuel Facility Web page, and in local news media. Following the public comment period, the draft EIS would be revised as necessary, and a final EIS would be published in January 2004. No cooperating agencies have been identified during the scoping process. The NRC will prepare the EIS with the assistance of the CNWRA. As discussed in Section 3, the EIS will analyze both construction and operation impacts.

In addition to the EIS for the Idaho Spent Fuel Facility, the NRC will prepare a safety evaluation report on health and safety issues raised by the proposed action. The safety evaluation report will document the NRC evaluation of the safety of the activities proposed by FWENC in its license application and the compliance with applicable NRC regulations.

In the notice of intent, the NRC announced the public scoping period (U.S. Nuclear Regulatory Commission, 2002b). Announcements of the scoping process were provided on the NRC Idaho Spent Fuel Facility Web page (<a href="http://www.nrc.gov/waste/spent-fuel-storage/idaho-spent-fuel.html">http://www.nrc.gov/waste/spent-fuel-storage/idaho-spent-fuel.html</a>) and in the following local newspapers:

- The Idaho News, Idaho Falls (Sunday, August 4 and Wednesday, August 7, 2002); and
- The Idaho Statesman, Boise (Sunday, August 4 and Wednesday, August 7, 2002).

The public scoping period extended from publication of the notice of intent on July 26, 2002, until September 16, 2002. During this period, 15 written comments were received from two organizations. These public comments are discussed in Section 2 of this report and have been categorized under the following issue headings:

- NEPA Issues
- Policy Issues
- Ecology, Air, and Water
- Cumulative Impacts
- Human Health Impacts
- Waste Management
- Security and Terrorism
- INEEL Infrastructure and Existing Conditions

The scope of the EIS and the summary of issues that will be addressed in the EIS are discussed in Section 3. Although issues raised during the scoping period will be considered in preparing the EIS for the proposed Idaho Spent Fuel Facility, some of these issues will either be analyzed in less detail or will not be analyzed at all, depending on their relevance to the proposed action and the anticipated impacts. Issues that will be considered, but not analyzed in detail, are summarized in Section 4. The preliminary outline for the EIS is included as Attachment A.

#### 2. SCOPING COMMENT SUMMARY

The following summary groups the comments received during the scoping period by technical area and issue.

#### 2.1 NATIONAL ENVIRONMENTAL POLICY ACT ISSUES

**Use of Existing NEPA Documents:** Both commenters noted that many of the impacts of the proposed action have been addressed by previous NEPA documents prepared by the DOE and the NRC (U.S. Department of Energy, 1995b, 2002; U.S. Nuclear Regulatory Commission, 1998). One commenter expressed concern, however, that the programmatic EIS prepared by the U.S. Department of Energy (1995b) to address the impacts of spent nuclear fuel management at the INEEL facility did not adequately address the potential impacts to the environment from flooding, earthquakes, and construction disturbances.

**Public Involvement:** One commenter noted that the NRC schedule for the scoping process did not allow for full development of scoping comments. They requested that the NRC make sure that the Citizens Advisory Board for the INEEL is on the distribution list for the draft EIS when it becomes available for public review.

#### 2.2 POLICY ISSUES

**Application of NRC Regulations:** One commenter noted the understanding that the FWENC license application will be considered under NRC regulations and that if the application is approved, FWENC would be authorized to receive, possess, store, and transfer spent nuclear fuel and other radioactive materials at the proposed Idaho Spent Fuel Facility.

#### 2.3 ECOLOGY, AIR, AND WATER

**Surface Water Impacts:** One commenter expressed concern that the INTEC area, where the spent nuclear fuel is currently stored and where the proposed Idaho Spent Fuel Facility would be located, are within the 100-year floodplain. The commenter also noted that there are multiple areas of existing contamination at INTEC, also within the floodplain. The commenter wanted the impact analysis to consider the effects of flooding and the existing areas of contamination.

**HEPA Filters:** One commenter pointed out that the potential environmental consequences of using sintered metal HEPA filters at the proposed facility have either not been documented, or have been documented in a cursory fashion.

**Air Emissions:** One commenter was concerned that the potential impacts of air emissions during the fuel rod drying process have not been documented in a satisfactory manner.

**Construction Impacts:** One commenter indicated that the previous DOE NEPA (U.S. Department of Energy, 1995b; 2002) analyses have not provided an adequate analysis of the potential environmental impacts of the construction disturbances associated with the proposed Idaho Spent Fuel Facility.

**Accident Issues:** One commenter expressed concern about the potential impacts to the environment due to earthquake. The commenter noted that previous NEPA analyses by the U.S. Department of Energy (1995b, 2002) have not adequately addressed this disruptive scenario. The same commenter also noted concerns with the potential environmental consequences of accidental nuclear criticality.

#### 2.4 CUMULATIVE IMPACTS

Past Releases and Continued Waste Generation: One commenter noted that previous DOE NEPA (U.S. Department of Energy, 1995b; 2002) analyses have not properly addressed the cumulative impact of previous releases of radioactive and hazardous materials within the context of continued generation of waste at the INTEC facility.

#### 2.5 WASTE MANAGEMENT

**Waste Generation:** One commenter raised concern over the cumulative impacts of continued generation of waste at the INEEL, particularly in the context of previous radioactive and hazardous waste releases.

#### 2.6 SECURITY AND TERRORISM

One commenter expressed concern that the INTEC represented a concentrated area of high-risk targets for internal and external terrorism. The commenter noted that external auditors have identified problems with the DOE facility security system and stated that the design basis threats considered in the DOE security procedures have not been updated to reflect concerns resulting from the September 11, 2001, terrorist attacks. The commenter wanted the NRC EIS to address the potential impacts of internal and external terrorism under realistic and current scenarios.

## 2.7 IDAHO NATIONAL ENGINEERING AND ENVIRONMENTAL LABORATORY INFRASTRUCTURE AND EXISTING CONDITIONS

**Spent Fuel Storage Expansion:** One commenter noted that the proposed action would be an expansion of spent nuclear fuel storage at the INEEL, and wanted the EIS to consider this in terms of cumulative impact with existing storage capacity at the site.

## 3. SCOPE OF THE ENVIRONMENTAL IMPACT STATEMENT AND SUMMARY OF ISSUES TO BE ADDRESSED

NEPA (Public Law 91-90, as amended), and the NRC's implementing regulations for NEPA (10 CFR Part 51), specify in general terms what should be included in an EIS prepared by the NRC. Regulations established by the Council on Environmental Quality (40 CFR Parts 1500-1508), while not binding on the NRC, provide useful guidance. The NRC has also prepared environmental review guidance to its staff for meeting NEPA requirements associated with licensing actions (U.S. Nuclear Regulatory Commission, 2001).

Pursuant to 10 CFR 51.71(a), in addition to public comments received during the scoping process, the contents of the draft EIS will depend in part on the environmental report submitted by FWENC. In accordance with 10 CFR 51.71(b), the draft EIS will consider major points of view and objections concerning the environmental impacts of the proposed action raised by other Federal, State, and local agencies, by any affected groups of Native Americans, and by other interested persons. Pursuant to 10 CFR 51.71(c), the draft EIS will list all Federal permits, licenses, approvals, and other entitlements which must be obtained in implementing the proposed action, and will describe the status of compliance with these requirements. Any uncertainty as to the applicability of these requirements will be addressed in the draft EIS.

Pursuant to 10 CFR 51.71(d), the draft EIS will include a consideration of the economic, technical, and other benefits and costs of the proposed action and alternatives to the proposed action. In the draft analysis, due consideration will be given to compliance with environmental quality standards and regulations that have been imposed by Federal, State, regional, and local agencies having responsibilities for environmental protection, including any applicable zoning and land-use regulations and water pollution limitations or requirements established or imposed pursuant to the Federal Water Pollution Control Act. The environmental impact of the proposed action will be evaluated in the draft EIS with respect to matters covered by such standards and requirements, regardless of whether a certification or license from the appropriate authority has been obtained. Compliance with the environmental quality standards and requirements of the Federal Water Pollution Control Act (imposed by the U.S. Environmental Protection Agency or designated permitting states) does not negate the requirement for NRC to weigh all environmental effects of the proposed action, including the degradation, if any, of water quality, and to consider alternatives to the proposed action that are available for reducing adverse effects. While satisfaction of NRC standards and criteria pertaining to radiological effects will be necessary to meet the licensing requirements of the Atomic Energy Act, the draft EIS will also, for the purposes of NEPA, consider the radiological and non-radiological effects of the proposed action and alternatives.

Pursuant to 10 CFR 51.71(e), the draft EIS will normally include a preliminary recommendation by the NRC staff with respect to the proposed action. Any such recommendation would be reached after considering the environmental effects of the proposed action and reasonable alternatives, and after weighing the costs and benefits of the proposed action.

The scoping process summarized in this report will help determine the scope of the draft EIS for the proposed Idaho Spent Fuel Facility. For example, the adequacy of the existing NEPA analyses prepared by the DOE and the NRC for actions at the INEEL facility (U.S. Department

of Energy, 1995b, 2002; U.S. Nuclear Regulatory Commission, 1998) will be examined within the context of the proposed action, and supplemented and updated as necessary. The draft EIS will also include analyses of the impacts of flooding, facility emissions, construction, as well as the potential effects of an earthquake on the facility. The draft EIS will contain a discussion of the cumulative impacts of the proposed action in the context of the INEEL site. The development of the draft EIS will be closely coordinated with the safety evaluation report prepared by the NRC to evaluate the health and safety impacts of the proposed action.

The No-action alternative will be considered in the draft EIS. This alternative will address not licensing the proposed Idaho Spent Fuel Facility and continuing the current interim storage of the Peach Bottom, Shippingport, and TRIGA reactor fuel. Neither commenting organization identified other alternatives to the proposed action. Other alternatives may be identified and analyzed during the preparation of the draft EIS.

Issues to be analyzed in depth pertain to the construction and operation of the proposed Idaho Spent Fuel Facility. In addition to the information provided in the documents prepared by FWENC as part of its license application to NRC, the draft EIS will also recognize previous NEPA analyses prepared by both the DOE and the NRC for activities at the INEEL (U.S. Department of Energy, 1995b, 2002; U.S. Nuclear Regulatory Commission, 1998).

The goal in writing the EIS is to present the impact analyses in a manner that makes it easy for the public to understand. This EIS will provide the basis for the NRC decision with regard to potential environmental impacts. Significant impacts will be discussed in greater detail in the EIS, and explanations will be provided for determining the level of detail for different impacts. This should allow readers of the EIS to focus on issues that were determined to be important in reaching the conclusions supported by the EIS. The following topical areas and issues will be analyzed in the EIS.

**Geology, Soils, Earthquakes, and Volcanoes.** The EIS will describe the characteristics of the INEEL, with specific attention to the area adjacent to the INTEC that will be disturbed by the proposed action. Evaluation of the potential for disruption of the facility by earthquakes or volcanic activity will be considered to the extent that they may have an impact on facility construction or operation. Existing contamination at the site will be identified to the extent that it may affect or be affected by the proposed action. The detailed analysis of the health and safety impacts, however, will be addressed in the safety evaluation report to be prepared by the NRC in support of its licensing decision.

**Hydrology.** The EIS will assess the potential impacts of the proposed project on the surface water, storm-water runoff, and groundwater resources including the Snake River Plain Aquifer. The assessment will consider water resources, water quality, water use, flood plains, and the probable maximum flood (the largest flood that is likely to occur). The EIS will not, however, evaluate the health and safety aspects associated with these site characteristics which will be addressed in the safety evaluation report.

**Air Quality.** Potential air quality impacts associated with the proposed action will be evaluated in the EIS. The evaluation will include potential impacts resulting from construction activities and operation (e.g., fuel rod drying activities) and will compare the anticipated air quality impacts, if any, with relevant standards.

**Ecology.** The area adjacent to the INTEC intended for the proposed facility is already in use as a construction laydown area, and has been substantially disturbed from its natural state. The EIS will include an update of threatened and endangered species and other ecological resources at the INEEL, focusing on the area immediately around the INTEC.

**Land Use.** The general land use activities at the INEEL will be summarized. The total area involved in the proposed action is confined to an existing industrial facility at the INTEC, therefore the level of detail in the impact analysis for land use is likely to be low. Existing NEPA analyses will be summarized and incorporated where appropriate.

**Cultural Resources.** The EIS will assess potential impacts of the proposed action on the historic, archaeological, and paleontological resources of the INEEL, with particular attention to the area adjacent to the INTEC that will be disturbed by the proposed action. The EIS will also describe the programmatic framework for evaluating these resources at INEEL.

**Transportation.** Transportation distances are short in the proposed action, and are not covered in the environmental report prepared by FWENC. The DOE, not FWENC, is responsible for the transportation of the spent nuclear fuel from its current storage location at the INTEC to the proposed facility. As a connected action, the EIS will rely on the DOE orders and procedures for transportation of spent nuclear fuel within the INEEL boundaries.

**Waste Management.** The EIS will document the quantities, types, and disposal of the potential waste streams resulting from the proposed action. The EIS will consider the impacts of these waste streams on the existing waste management capacities at the INEEL, either specifically or through incorporation of reference material from existing NEPA analyses.

**Socioeconomics.** All activities related to the proposed action are restricted to within the INEEL boundaries, so the EIS will consider the socioeconomic impact of the proposed action to the extent that it affects employment at the INEEL and imposes additional burden on the existing services provided by the communities immediately around the INEEL. These may include impacts on housing, social services, and emergency services or other impacts identified during the preparation of the EIS.

**Environmental Justice.** The potential for disproportionately high or adverse human health or environmental impacts on minority and low-income populations will be evaluated and discussed at the census block level. Because all activities related to the proposed action are restricted to within the INEEL boundaries, the EIS will consider the impact on these communities immediately around the INEEL either specifically or through incorporation of reference material from existing NEPA analyses.

**Aesthetics.** The aesthetics of the INEEL, specifically the INTEC, will be summarized. The proposed facility is confined to an existing industrial facility at the INTEC, therefore, the level of detail in the impact analysis for aesthetics is likely to be low. Existing NEPA analyses will be summarized and incorporated where appropriate.

**Noise.** The current noise aspects at the INTEC will be summarized. The proposed facility is confined to an existing industrial facility at the INTEC, therefore, the level of detail in the impact analysis for noise is likely to be low. Existing NEPA analyses will be summarized and incorporated where appropriate.

**Human Health Impacts.** In preparing its safety evaluation report, NRC will evaluate the potential human health impacts of the proposed facility on the workers and the general public for normal operations (including construction, handling, transfer, and inspection activities) and under off-normal or accident conditions. The detailed analyses will be reported in the safety evaluation report and summarized in the EIS. Potential exposures to radioactive materials and to hazardous chemicals will be considered. Both cancer and non-cancer health effects will be evaluated, as appropriate. Calculations for the general public account for sensitive populations as well as normal healthy adults. Models, assumptions, and supporting data used to develop the impacts from these potential exposures will be clearly described. The safety evaluation report will assess the impacts associated with all credible accidents at the proposed Idaho Spent Fuel Facility, both from natural and human activities. Based on the analyses in the safety evaluation report, the EIS will summarize the potential environmental impacts resulting from credible bounding accidents at the proposed facility.

In the context of the EIS, DOE and FWENC programmatic plans for security, emergency response, and environmental monitoring activities will be considered as mitigation measures for potential impacts. These issues may be summarized and discussed in the EIS to the extent that they are required as mitigation measures.

**Decontamination and Decommissioning.** The November 2001 license application submitted by FWENC includes a proposed decommissioning plan that includes decontaminating and/or removing systems and components of the proposed facility. The EIS will include an evaluation of the effects of decontaminating and decommissioning the Idaho Spent Fuel Facility.

**Cumulative Impacts.** The EIS will analyze the potential cumulative impacts of the proposed facility in the context of past, present, and reasonably foreseeable future actions. This will include impacts from connected actions such as the transportation of the fuel from its current storage location at the INTEC to the proposed facility.

**Unavoidable Adverse Environmental Impacts.** The EIS will include a discussion of potential environmental impacts, if any, that could not be avoided if the proposed action were to be implemented.

**Irreversible and Irretrievable Commitment of Resources.** The irreversible and irretrievable commitment of resources, including land use, materials, and energy will be discussed. Potential waste minimization and pollution prevention activities and mitigation measures will be evaluated.

**Cost-Benefit Analysis.** The EIS will include a cost-benefit analysis that summarizes the environmental and other costs and benefits of the proposed action.

**Compliance with Applicable Regulations.** The EIS will present a listing of the relevant permits and regulations that apply to the proposed action. Consultations with involved Federal, State, and local agencies will be documented as appropriate.

Although not anticipated, any pertinent proprietary information that is not available to the public will be reviewed by the NRC in preparing both the safety evaluation report and the EIS. By law, however, the NRC must protect any proprietary information from public disclosure. Therefore, any proprietary information will not be released to the public. As indicated above, all available non-proprietary documentation generated by the DOE and FWENC will be used and incorporated by reference, as appropriate.

# 4. ISSUES CONSIDERED PERIPHERAL, OUTSIDE THE SCOPE OF THE PROPOSED ACTION, OR COVERED BY PRIOR ENVIRONMENTAL REVIEW

Issues raised during the scoping period for the proposed Idaho Spent Fuel Facility at the INEEL are summarized in Section 2 of this report. Section 3 outlines the subjects and issues that will be addressed in detail in the EIS. Certain issues will not be addressed in depth in the EIS. Major categories of these issues and the reasons for not analyzing them in detail in the EIS are explained in this section. In general, these issues are not directly related to the assessment of potential impacts from the proposed major Federal action now under consideration. The lack of in depth discussion in the EIS, however, does not mean that an issue or concern lacks value. Issues beyond the scope of the EIS may not yet be ripe for resolution, or are more appropriately discussed and decided in other venues. For example, health and safety issues will be considered in detail in the safety evaluation report prepared by NRC for the proposed action and will be summarized in the EIS.

#### 4.1 PREVIOUS U.S. DEPARTMENT OF ENERGY DECISIONS

Both commenters noted that previous NEPA analyses have been prepared by the DOE for the INEEL (U.S. Department of Energy, 1995b; 2002). Sections of these EISs may be relevant to the proposed Idaho Spent Fuel Facility, and will be reviewed in preparing the draft EIS. Because the scope of the proposed Idaho Spent Fuel Facility EIS is limited to the licensing action now under review by NRC, issues pertaining to decisions already made by DOE will be addressed by referencing the appropriate DOE NEPA analysis, and by summarizing the information, as appropriate.

#### 4.2 IMPACTS FROM TERRORISM

One commenter identified the INTEC area as a potential target for internal and external terrorism. However, the EIS will not address the impacts of terrorism as the staff does not consider these impacts to be reasonably foreseeable as a result of the proposed action. However, it must be noted that the consideration of terrorism issues in NEPA documents is currently an issue before the Commission in a number of adjudicatory proceedings. The staff will incorporate these decisions as they become available.

#### 5. REFERENCES

- U.S. Department of Energy. "Idaho High-Level Waste and Facilities Disposition Final Environmental Impact Statement." DOE/EIS-0287-F. Idaho Falls, Idaho: DOE. 2002.
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- U.S. Nuclear Regulatory Commission., "Final Environmental Impact Statement for the Construction and Operation of an Independent Spent Fuel Storage Installation to Store the Three Mile Island Unit 2 Spent Fuel at the Idaho National Engineering and Environmental Laboratory." NUREG-1626. Washington, DC: NRC. 1998.



# ENVIRONMENTAL IMPACT STATEMENT FOR THE PROPOSED IDAHO SPENT NUCLEAR FUEL FACILITY INDEPENDENT STORAGE INSTALLATION—PRELIMINARY OUTLINE

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